DOCUMENT RESUME

ED 459 799 IR 058 294

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TITLE	Reaching the Unreached for Library and Information Science Education: A Perspective for Developing Countries.
PUB DATE	2001-08-00
NOTE	11p.; In: Libraries and Librarians: Making a Difference in the Knowledge Age. Council and General Conference: Conference Programme and Proceedings (67th, Boston, MA, August 16-25, 2001); see IR 058 199.
AVAILABLE FROM	For full text: http://www.ifla.org.
PUB TYPE	Reports - Descriptive (141) -- Speeches/Meeting Papers (150)
EDRS PRICE	MF01/PC01 Plus Postage.
DESCRIPTORS	Access to Education; Developing Nations; Disadvantaged; *Distance Education; Educational Technology; Foreign Countries; Higher Education; *Information Science Education; *Instructional Development; Library Science; Models; *Open Education; *Open Universities
IDENTIFIERS	Indira Gandhi National Open University (India)

ABSTRACT

Open and distance learning is seen as a viable alternative to provide education for all, particularly in the context of developing countries. Open learning is basically a philosophy, while distance learning is a method of flexible education for the unreached, i.e., socially, economically, physically, and geographically disadvantaged groups of the society. In a skill-oriented discipline like library and information science (LIS), the circumstantial disadvantaged group would benefit from continuing education to enhance and upgrade their skills. Various models of distance education, based on the application of technology, have been developed. In India, five open universities and 60 correspondence departments in other universities offer such education, including Indira Gandhi National Open University (IGNOU). This paper analyzes the efforts of IGNOU to reach the unreached. The models selected should be based on learners' requirements, their capability, and the infrastructure available to them. Development of multimedia and simulated courseware together with internship will produce successful LIS professionals. (Contains 10 references.) (Author/MES)

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ED 459 799

67th IFLA Council and General Conference August 16-25, 2001

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Division Number: VII
Professional Group: Education and Training **Workshop**
Joint Meeting with: -
Meeting Number: 193
Simultaneous Interpretation: -

Reaching the unreached for library and information science education: a perspective for developing countries

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Abstract:

Open and distance learning is seen as a viable alternative to provide 'Education for all', particularly in the context of developing countries. The open learning is basically a philosophy while distance learning is a method of flexible education for the unreached –socially, economically, physically and geographically disadvantaged groups of the society. In a skill oriented discipline like library and information science, the circumstantial disadvantaged group is another group for opportunity for continuing education to enhance and upgrade their skills. Various models of distance education, based on the application of technology have been developed. In India, 5 open universities and 60 correspondence departments in other universities offer such education, the Indira Gandhi National Open University (IGNOU) at the apex. The paper analyses the efforts of IGNOU to reach the unreached. The models to be selected should be based on learner's requirement, their capability and infrastructure available to them. Development of multimedia and simulated courseware together with internship will be able to produce successful LIS professionals.

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Preamble

The developing countries of the world are facing with the problem of providing education to all section of their people. The problem is multiplied for nations like India where rate of population growth is very high, resulting in growth of illiteracy rate. The reducing of the gap between illiterates and literates will eventually reduce the gap between two groups of people – rich and poor and ultimately two groups of nations – developed and developing. Many programmes like 'Education for All', 'Universal Educations' etc., have been undertaken to address the problem. Open and distance education system is considered as a viable alternative to take education to all for whom education remains unreached.

Development of Distance Education as a Viable Alternative for Education for All

In the present societal context, education through open university system is gaining importance and becoming popular throughout the world. The tremendous development in technology is challenging the basic foundation of traditional education system. There has been a paradigm shift in the teaching and learning methods, tools and techniques. During the last two decades or so, the complete dependence of teachers and taught on print media is being crumbled by other types of media – electronic, magnetic and optical media. The developments of high-speed communication technologies using satellite and fibre optics links are changing the face of classrooms – from four walls to without walls. The convergence of different media and communication technologies is ushering in a new era of educational system – from face to face teaching-learning to distance teaching- learning; from four wall classroom to virtual classroom; and from traditional university system to virtual university system. As Peter Drucker has predicted that after thirty years, there will not be existence of any university, as we understand it to day. The present big educational institutional campus will stand as a symbol of history. The entire structure of present higher education system will face a sea change in the years to come. From this, it is obvious that the experts have reservations about present traditional educational system and are pointing towards distance education system.

Distance education is not a new concept and should not be thought of as a development of this century. History shows that it was very much in practice in Europe during 19th century. Two educationists – Charles Thuzo and Gustov Langjensidth introduced the European languages teaching through the postal system. They were the first to establish distance education center in Germany. But modernization of distance education system was started in 1892 at Harvard University, where 39 different courses through distance education mode were started under the guidance of William Rainie. Towards the middle of twentieth century, this mode of education became popular and was wide spread all over the world, the important ones being in the countries like Russia, Sweden, Great Britain, Germany, France, Japan and Australia. In 1960, the worldwide figure of distance education learners at secondary level was around 10.6 million. In 1970, it increased to around 20 million[7]. Not only the famous universities initiated distance learning centres, a number of open universities came into existence throughout the world. In addition to teaching in subjects like arts and humanities, social sciences, agriculture, journalism, nursing, home science and marketing, distance education was started in applied science, technology and medical sciences also. This trend of developed countries came gradually in developing countries also. In course of development of distance education system, different models/systems have been developed, based on the media and technology of delivery system. In developed countries, the technologies developed even for conventional education system are equally suited for distance education. In fact, use of such technologies in education is minimizing the conceptual framework of both the systems. In case of developing countries situation is quite different. Depending upon the extent of availability and accessibility, different countries are using different technologies/models for educating distance learners.

In the context of changed working environment during the last five-six years, particularly due to globalization and corporatization, the competition has increased in all spheres of society, particularly in employment market. Acquiring higher degrees has become imperative to compete and sustain in this changed environment. The need and relevance of distance education are naturally gaining more importance than ever before. The open learning system has added a new dimension to it.

Open Education Vs. Distance Education

The open education system is more a philosophy than the method, whereas distance education is a method of universalizing education. The origin of distance education can be traced to be started by correspondence course by St. Paul who used to write letters to individual churches and ask the local church elders to read them to their respective communities when they assembled for worship[1]. The distance education, which, thus, started through correspondence courses, has traveled through various stages based on instructional methods, termed as generations or models[5]. These generations/models are based on the nature of physical medium through which learners have facility to have access to education irrespective of space.

a) Correspondence Model
b) Model based on combination of different Media individually, Print, Audiotape, Videotape, Computers, Lecture through Radio, Television.
c) The Tele-learning Model – Interactive audio-video teleconference
d) Flexible Learning Model – Multimedia, Internet, Computer mediated communication.

The open education system implies that it offers the people the flexibility in educating themselves according to their choice irrespective of the barrier of space and time. "The entire idea of open university system is on a cafeteria system of education wherein everyone could take whatever they want without any hindrance"[10]. The openness in open education system presupposes the availability of education – **anyone, anywhere and anytime** without social, physical and geographical restrictions.

The learner-centeredness is the key to the open learning system whereas it need not necessarily be the same for distance learning system. In fact, the learner-centeredness guides the structure, process, behaviour of open learning system through distance education mode[6]. The success of distance education system depends upon its capability to:

a) develop need based programmes/courses.
b) develop usable study materials.
c) lay emphasis on public relations.
d) provide study materials to learners at regular interval.
e) develop infrastructure for proper counselling.
f) develop appropriate link between learners and study centre.
g) maintain punctuality in examination and result.
h) offer regular seminar and workshop.
i) maintain regular contact with traditional institutions.
j) develop mechanism for curricula revision and updating from time to time.

Open and Distance Education in India

India is a vast country of about 1000 million people with rich and diverse cultural heritage and a unique social conglomeration. Though, since independence, a substantial progress has been made in all direction including education, still the literacy rate could not be achieved beyond 60% at present. Open and distance learning is seen as a viable alternative to address to the problem for 'education for all'. This is pronounced in the National Policy for Education (1986) which states that 'the future thrust will be in the direction of open and distance learning'. This statement obviously points towards basic and higher

education, aiming at eradication of illiteracy and developing manpower for scientific, technological and societal development of the country. In India, distance education method has taken a firm root in the education system of the country. The establishment of the National Open School, the Indira Gandhi National Open University (IGNOU) and the decision of establishing open universities in each state of the country are enough evidences of government's determination to boost the education system through open and distance learning mode. Many of the conventional universities have opened distance education departments in different subjects supplementing the regular courses. The open learning system for higher education is, thus, aimed to provide education to those sections of disadvantaged literate groups who aspire to have higher education but do not have access to conventional education system for some reason or the other. It is estimated that about 20 per cent of total enrolment in higher-education is in the open and distance learning institutions.

The institutionalized distance education system in India was first started in Delhi University in 1962 with the starting of School of Correspondence Courses. The establishment of first university for open learning in 1982 – the Andhra Pradesh Open University (a state level university) and also the establishment of Indira Gandhi National Open University in 1985 with Parliamentary enactment are a great leap forward in this direction. At present, there are 10 open universities and 62 correspondence/distance education centers (attached in conventional universities) functioning in the country, offering courses on various disciplines, the IGNOU being the apex body for distance education in the country[4].

Educating the Unreached

The purpose of open and distance higher learning is to take education to the under-privileged and also, unreached section of the society – the economical, geographical, physical and social. Majority of these sections, already having basic education, look for higher education for prosperity in the competitive employment market. Thus, in addition to regular education, a well planned continuing and lifelong education programme is vital for which open and distance learning method plays a significant role. Most of the countries – developed and developing are, therefore, considering it as a complimentary system with the conventional method of education. The changed economic policy and globalization of market demands more trained, skilled and educated workforce in a vast country like India. At the same time the conventional system of education are unable to respond to the requirement due to its inherent limitation to reach the unreached. Thus, the open and distance learning institutions have a major role to play for reaching the under privileged who constitutes majority of literate mass.

Reaching the Unreached – The Methods Followed in India

To reach the unreached, the delivery mechanisms followed for the programmes in open universities in India are:

a) Print materials
b) CD-ROM based materials
c) Audio-video tapes
d) Face to face counseling and practicals at study centers
e) Teleconferencing
f) Interactive radio counseling
g) Digital learning through Internet and Web-based (for Computer Courses of IGNOU)
h) Contact program through electronic mail
i) Seminars and Workshops
j) Virtual Campus Initiative (IGNOU is in process of establishing 14 Tele-learning centres for its computer courses)
k) Evaluation through assignments and examination in conventional mode.

Who are Unreached in LIS

The reason for initiation of open and distance learning system in developing countries is different than that of developed countries. In case of developed countries, it is more of technology driven whereas in case of developing nations it is need driven – the need for general education of huge number of illiterate people. This is evidenced in the education policy document. In case of professional higher education in developing nations, the open and distance learning is embraced as a necessary educational system aimed to produce skilled manpower to address the unemployment problem of these countries. Taking the example in India, the number of students registered in computer science, management studies courses and other professional courses are much more than the other disciplines offered under this system. To cite an example, among the total of 2,91,360 students registered in 2001 for 62 programmes (comprising of 67 courses) offered by IGNOU, around 66,000 registrants are in different computer courses and 14,680 in management studies courses. The under-privileged groups in professional disciplines for whom the regular education system is not accessible are slightly different from that of others. Considering library and information science as an example, the need for higher education is to acquire/enhance the skills required to meet the changing library and information market. In the emerging information and knowledge based society, the employment market is vast which the limited conventional education system are/will not be able to cope-up with. In view of the increased job opportunities in information market, the library and information science courses are considered as a prospective area for employment. Those who intend to opt for LIS courses comprise of two groups – graduates who want to choose LIS as their profession for increased job opportunities and those working professionals who intend to upgrade their knowledge and skills.

Thus, the 'unreached' groups in professional disciplines like LIS to be targeted for education are slightly different from other traditional disciplines. These constitute those who are:

a) geographically under-privileged
b) socially under-privileged
c) physically under-privileged
d) circumstantial under privileged.

The economically under privileged groups is not that prominent in this case, particularly for those working professionals who constitute the major beneficiary of this system.

Skills Required of LIS Professionals

The impact of information in all spheres of society coupled with the utilization of IT development for access and utilization of information are dramatically changing the face of the libraries and information institutions. Knowledge based societies are the reality of the near future where information and knowledge will act as a key to the development of a nation. The transition to knowledge based societies will be dependent upon the capability of creation and organization of information and knowledge. In this changing scenario, the custodian role of library and information professionals are changing to the role of facilitators and distributors. This change is very much visible in case of developed countries where the employment market constitutes different types of information related activities with a combination of traditional skills of library and information science and technological skills. The purpose of LIS education is to provide skills for developing professionals who link the people and information.

In the context of developing countries, at least for few years to come, many of libraries will continue to retain their traditional forms and activities, may be even with the application of IT. Apart from the traditional library related work, the emerging market of LIS professionals are in the area of information creation including communication and consolidation, user support, content development and management,

information resources management and services, information system design and administration, information retrieval etc. Most of these require special skill development with varieties of practical input.

Reaching the Unreached in LIS – The Efforts of IGNOU

The LIS education in India through open and distance learning mode was started in 1985 with the offering of Bachelor's in Library and Information Science course by Andhra Pradesh Open University (now B.R. Ambedkar Open University), followed by the Bachelor's Degree programme started by the Indira Gandhi National Open University (IGNOU). At present, five open universities at national and state level are offering library science courses at various levels. In addition, out of more than 100 universities offering LIS programmes, 21 correspondence/distance education departments of conventional universities are also offering LIS courses at various levels. It is estimated that about 4000 students are turned out annually by the open universities and other distance education departments. The IGNOU at present conducts Library and Information Science Programmes at Bachelor's Degree (B.Lib.I.Sc., started in 1989) and Master's Degree (M.Lib.I.Sc., started in 1994) level. Besides, three more programmes – Ph.D., Certificate in Library Automation and Networking (meant for junior level working library professionals) and Post Graduate Diploma in Library Automation and Networking (for senior level working professionals) are under development.

The mechanisms followed in conducting these courses are:

1) Printed study materials.

2) Direct contact programme for a specific period of time at the study centers/ programme specific centers, spread all over the country. At present, there are 69 such centres for B.Lib.I.Sc. and 25 programme specific centers for M.Lib.I.Sc. courses, located at various places.

3) The practical components of these courses are conducted at the study centers/ programme specific centers. These centers have either been provided with or are already equipped with necessary infrastructure and tools required for practical work – a compulsory component of the courses. For the courses where practical work is not required, the students have to offer seminars on a topic related to the courses.

4) To supplement the study materials, each study center is equipped with a library for facilitating further reading.

5) In addition to print materials, audio, video tapes and video in CD-ROM, prepared for specific courses, are made available to the learners either at the study centers or through sale.

6) Interactive radio counseling from time to time as a back-up contact programme. Recently, a 24 hours educational network of local FM radio stations – Gyan Vani, dedicated to education has been launched.

7) Interactive Teleconferencing
The teleconferencing is conducted in interactive mode (phone-in counseling and teleconferencing) from 38 cities in India through Gyan Darshan, the 24 hours educational TV channel of India.

8) E-mail facilities for interaction with the faculty members as and when required.

The last three mechanisms mentioned above facilitate the students to have contact even from the home.

9) The evaluation methodology followed is a continuous one through assignments throughout the session and term-end examinations, conducted twice a year. A student may complete the courses within a span of four years.

Following tables show the number of students registered, passed in the two courses and the social background:

Table 1: No. of Students Registered and Passed in B.Lib.I.Sc.

Year	No. of Students Registered			No. of Students Passed (Percentage)
	Male (Percentage)	Female (Percentage)	Total	
1992	821 (57)	623 (43)	1444	554 (38)
1993	812 (55)	658 (45)	1470	504 (34)
1994	734 (57)	518 (43)	1282	405 (32)
1995	702 (56)	542 (44)	1244	423 (34)
1996	725 (54)	616 (46)	1341	473 (35)
1997	701 (54)	588 (46)	1289	425 (33)
1998	620(50)	617 (50)	1237	-
1999	700 (45)	887 (55)	1587	-
2000	930 (41)	1323 (59)	2253	-
2001	1483 (41)	2165 (59)	3648	-
Total	8228 (49)	8567 (51)	16795	-

Table 2: No. of Students Registered and Passed in M.Lib.I.Sc.

Year	No. of Students Registered			No. of Students Passed (Percentage)
	Male (Percentage)	Female (Percentage)	Total	
1995	419 (51)	402 (49)	821	237 (29)
1996	291 (46)	339 (54)	630	172 (27)
1997	276 (45)	342 (55)	618	-
1998	225 (47)	255 (53)	480	-
1999	211 (47)	242 (53)	453	-
2000	263 (43)	343 (57)	606	-
2001	400 (44)	504 (56)	904	-
Total	2085 (46)	2427 (54)	4512	-

The number of students registered in the B.Lib.I.Sc. programme shows a steadiness in growth from 1994 to 1998 (Table 1). From 1999, it shows a substantial increase because of the fact of relaxation in entry requirement. Though in terms of percentage, the male students admitted are more or less the same since1999, the growth in terms of numbers are substantive. In case of female students, there has been a steady growth both in terms of numbers and percentage since 1997. The percentage of students passing the programme varies between 32-38 per cent which means that drop out rate is above 60 per cent. The pass out figures for students admitted since 1998 have not been shown, as still they have the opportunity of completing the programme within four years.

As far as M.Lib.I.Sc. is concerned, the trend is more or less the same as in B.Lib.I.Sc. However, the pass percentage in all these years is below 30, indicating that drop out rate is more here (above 70%). The drop out rates in both of the IGNOU programmes are quite low. In the absence of any study to find out the reasons thereof, it is difficult to point out to any reason thereof.

The students registered in 1998 and 1999 and so far passed in B.Lib.I.Sc. are 347 and 247 respectively, whereas in M.Lib.I.Sc. it is 97 and 30. This signifies that the learners prefer to complete the programme according to their convenience (within a span of four years). One significant feature to be noticed is that there is almost 50% increase in admission in 2001 over the previous year in both the programmes.

Table 3: Social Category-wise Distribution of Registrants in B.Lib.I.Sc. and M.Lib.I.Sc.

Year	B.Lib.I.Sc.				M.Lib.I.Sc.			
	Social Category*				Social Category*			
	PH	BC	General	Total	PH	BC	General	Total
1996	16(1%)	301(22%)	1024(77%)	1341	94(15%)	59(9%)	477(76%)	630
1997	0	150(12%)	1139(88%)	1289	NA	NA	NA	NA
1998	44(4%)	527(43%)	666(53%)	1237	9(2%)	174(36%)	297(62%)	480
1999	9(0.5%)	368(23%)	1210(76%)	1587	3(1%)	370 (82%)	80(17%)	453
2000	18(1%)	472(21%)	1763(78%)	2253	7(1%)	128(21%)	471(78%)	606
Total	87(1%)	1818(24%)	5802(75%)	7707	113(5%)	731(34%)	1325(61%)	2169

* PH – Physically Handicapped, BC – Backward Class, NA – Not Available

One of the objectives of open and distance education system is to provide education to the disadvantaged groups of the society. The above table shows, how far IGNOU has been able to provide LIS education to such disadvantaged groups. One fourth of registrants in B.Lib.I.Sc. and more than one third of registrants in M.Lib.I.Sc. are from two disadvantaged groups of the society – physical and social. The overall percentage of registrations in B.Lib.I.Sc and M.Lib.I.Sc. programs during the last five years for this group are 25 per cent and about 40 per cent respectively. In terms of physically disadvantaged and socially disadvantaged registrants, physically disadvantaged group comprises of 1 per cent in B.Lib.I.Sc. and 5% in M.Lib.I.Sc. programmes whereas the socially disadvantaged (backward classes) groups of the society comprise of 24 per cent and 34 per cent for B.Lib.I.Sc. and M.Lib.I.Sc. programmes respectively. Though the registration of general students is more in both these programmes, in M.Lib.I.Sc. programme, two disadvantaged groups accounted for 83 per cent registration in 1999.

The break up of admission data according to social groups shows that open and distance learning provides a good opportunity for education for disadvantaged learners for whom the traditional system may not be available easily.

Distance Education in LIS – Issues for Developing Countries

Any professional disciplines are skill oriented. The students are to be made equipped with the skills required for the prevalent job market. Taking the example of library and information science, it is a service-oriented profession, the basic ingredient of which is content, information and users. The techniques of content/information organization and providing services vary from situation to situation, for which the practical exposure in actual work environment plays an important role in capacity building. This is in this area where the traditional courses have the advantages of providing hands-on experience on actual work environment. The problem arises how to impart the skills in distance mode. Possibly, that is why offering of courses in professional disciplines is not as wide as in the others. The limited number of contact programmes in the study centers may not be adequate in developing skills. At the same time,

contact programme from a physical distance such as audio, video and interactive counseling may not make a student thorough amongst in the methods and techniques of intricate aspects of the subject.

The factor that affects the successful implementation of LIS education through distance mode is the extent of providing exposure in the actual working of libraries and information centers and providing hands-on experience to acquire the skills.

Though, the distance education methodology has travelled through four generations/ models based on prevalent available technology of delivery system and its applicability. These models emanate from developed countries. Application of these models in developing countries is dependent upon various factors such as, available infrastructure, learners' capability in handling the technology and access facility of learners. Same model may not be useful and practicable to all, depending upon societal situations. Neither, a particular model be useful in all courses, even within an institution offering different courses. Basically the first three generation techniques/models which comprise of print, combination of media and computers are followed by different distance education institutions in India. The situation in other developing nations need not be different. The impediments which put hindrances for adoption of the latest model are lack of:

a) accessible facilities of technology based delivery by learners.
b) capability of learners to use the technology.
c) availability of technological gadgets for the learners.
d) courseware using the fourth generation technology.
e) faculty competence to develop technology based courseware.

These are the general problems which the open and distance education system in developing countries are facing to implement the model for reaching the unreached. Depending upon the situation, the developing nations have to make a choice of existing model(s) or develop an alternate one which suits the conditions.

In case of LIS education, if the learners of the system are to compete in the employment market, the model has to be based on developing such a system where media based learning model and working in a practical environment converges. This problem may be minimized with the development of modules using the IT, say developing interactive multimedia courseware, simulated courseware etc. The critics of distance learning systems points to the inadequacy of the system as far as practical skill aspects are concerned. In many cases, the distance learners are not treated at par with conventional learners in work environment.

Depending upon existing social conditions in developing countries, it is felt that dual mode delivery system for distance education – print based and other media based will continue at least for some years to come till the time the learners develop skills to handle interactive multimedia based technology.

In addition to development of simulated practical courseware, the inclusion of internship programme in LIS courses as a compulsory component should be able to produce successful library and information professionals, even through open and distance learning method. Continued evaluation and research on discipline based delivery system and its efficiency will enable to develop appropriate model useful in a particular context.

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